

REMARKS

In response to the election of species requirement, Applicants provisionally elect Species I, an apparatus for producing electromagnetic radiation having insulation surrounding a flow generator. Claims **55-75** and **115-116** read upon the elected species. This election is made with traverse. The traversal is set forth below.

The Examiner has stated that the present application contains claims directed to the following patentably distinct species:

Species I: The apparatus for producing electromagnetic radiation having specific insulation surrounding flow generator.

Species II: The apparatus for producing electromagnetic radiation having specific structure of cathode and anode.

Species III: A system having plurality of apparatus for producing electromagnetic radiation.

Species IV: A system having plurality of apparatus for producing electromagnetic radiation.

Species V: The apparatus for producing electromagnetic radiation having exhaust chamber extending beyond electrodes.

Species VI: The apparatus for producing electromagnetic radiation having power supply in communication with electrodes.

Species VII: The apparatus for producing electromagnetic radiation having cooling system.

Species VIII: The apparatus for producing electromagnetic radiation having removal device.

Election / Restriction

Applicants provisionally elect Species I (claims **55-131** and **115-116**), with traverse, on the grounds discussed below.

Traversal of Election of Species Requirement

Applicants respectfully submit that the Election of Species requirement is traversed, for either one of the following reasons:

- (1) Applicants respectfully submit that the claims corresponding to Species I - VIII are not directed to mutually exclusive "species" within the meaning of M.P.E.P. § 806.04 or 37 C.F.R. § 1.141; or
- (2) in the alternative, Applicants respectfully submit that it would not be a serious burden on the Examiner to search and examine Species I - VIII in the same application.

(1) Mutually Exclusive "Species"

M.P.E.P. § 806.04(e) provides that,

"Species are always the specifically different embodiments". [italics in original; underlining added]

Even if two or more species are claimed, M.P.E.P. § 806.04(f) provides that restriction will only be proper,

"if the species are mutually exclusive. Claims to different species are mutually exclusive if one claim recites limitations disclosed for a

first species but not a second, while a second claim recites limitations disclosed only for the second species and not the first.
[emphasis added]

In other words, in order for two claims to be directed to mutually exclusive “species”, one claim must recite limitations which according to the disclosure are found in a first species but not in a second, while a second claim must recite limitations disclosed only for the second species and not the first.

Applicants respectfully submit that Species I - VIII do not relate to different mutually exclusive “species” under the above test. Applicants respectfully note that the *disclosure* of the present application does not describe “alternative” or mutually exclusive embodiments, but rather, describes a single illustrative embodiment of the invention.

For example, in the single disclosed illustrative embodiment, as shown in Figure 2, the single apparatus 100 includes all of the following features:

- an electrically insulated flow generator 150 (Species I);
- a cathode 106 and an anode 108 having specific structure (Species II);
- a conductive reflector 116 (Species IV);
- an exhaust chamber 110 (Species V);
- a power supply system 130 (Species VI);
- a cathode coolant channel 360 (Species VII);
- removal devices including a filter 144 within the separation and purification system 142, and a disposal valve 160 (Species VIII);

Thus, all of the features that the Examiner has associated with Species I, II, IV, V, VI, VII and VIII are found in the single disclosed embodiment shown in Figure 2.

In addition, Figure 16 shows a single system 1600 comprising a plurality of apparatuses 1602, 1604, 1606 and 1608 for producing electromagnetic

radiation (Species III). From the description of Figure 16, it is clear that each of the plurality of apparatuses 1602, 1604, 1606 and 1608 is similar to the apparatus 100 shown in Figure 2 (see e.g. page 58, lines 18-24 of Applicant's specification as filed).

Thus, the system 1600 shown in Figure 16 includes all of the features of Species I, II, III, IV, V, VI, VII and VIII as identified by the Examiner.

As all of the features of Species I – VIII are found in the same embodiment, it is clear that these features are not "mutually exclusive" as defined in M.P.E.P. § 806.04(f), quoted above.

Therefore, the eight groups of claims identified by the Examiner are not mutually exclusive "species" as defined in M.P.E.P. § 806.04(e)-(f). Accordingly, requiring election or restriction between these groups of claims is improper. Applicants therefore respectfully request that the restriction requirement be withdrawn.

(2) "Serious Burden"

M.P.E.P. § 803 provides that,

There are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) The inventions must be independent ... or distinct as claimed; and

(B) There would be a serious burden on the examiner if restriction is not required ... [emphasis added]

It is clear that both of the above criteria must be satisfied in order to support a restriction requirement. In this regard, M.P.E.P. § 803 expressly states,

If the search and examination of all the claims in an application can be made without serious burden, the examiner must examine them on the merits, even though they include claims to independent or distinct inventions. [emphasis added]

Applicants respectfully submit that examination of the claims in groups I through VIII in the present application would not impose any “serious burden” as contemplated in M.P.E.P. § 803.

In the present case, a *prima facie* showing of a serious burden has not been established, as the present Office Action does not contain any showing by appropriate explanation of either separate classification, separate status in the art, or a different field of search (c.f. M.P.E.P. § 803.II).

Thus, Applicants respectfully submit that it would not pose a “serious burden” to examine all of claims **55-131** in the present application, as contemplated in M.P.E.P. § 803. Applicants therefore respectfully request that the restriction requirement be withdrawn.

Reiteration of Previous Traversal

Applicants also respectfully reiterate the grounds for traversal submitted in response to the previous restriction / election of species requirement, and respectfully request examination of all of claims **1-144** presently pending.

Summary and Conclusion

In summary, Applicants provisionally elect Species I (claims **55-75** and **115-116**) with traverse, and respectfully request favorable consideration of the foregoing reasons for traversal.

This election is made without prejudice or disclaimer. Applicants reserve the right to pursue the remaining claims in a divisional application.

Conclusion

Should there be any questions concerning this application, the Examiner is invited to contact the undersigned agent at the telephone number appearing below. Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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